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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/510,003

09/30/2004

Francesco Carlin

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EXAMINER

EDWARDS, LYDIA E

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/510,003

Applicant(s)

CARLIN, FRANCESCO

Examiner

Lydia Edwards

Art Unit

1709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on September 30, 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on September 30, 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/23/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 5, 6, and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 3, 5, and 6, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 14 is indefinite because it contains the trademark EVERCLEAN 104NS. The claim scope is uncertain because the trademark cannot be used properly to identify any particular material or product.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raspanti et al. (US 6232412) in view of Nakamura et al. (EP 0821008) and Masuko et al. (US 5674953).

Regarding Claim 1, Raspanti et al. ('412) teaches an aqueous solution which contains a salt of an anti-scaling agent which comprises a product of condensation of an aldehyde, a phenolic compound and an aromatic carboxylic acid hydroxylated at the aromatic nucleus (Col 2 lines 6-8). Raspanti et al. also teaches applying an aqueous solution to the walls of a reactor (Col. 4, lines 52-67).

Raspanti et al. does not teach that the pH value of the aqueous solution is changed to a pH of less than 5.

Masuko et al. ('953) teaches a similar antifouling agent which only consists of a phenol and an aldehyde in that the pH-value of this aqueous solution is changed to a pH-value of less than 5 (Col. 10, lines 41-45). The reference also suggests the presence and or use of an aromatic hydrocarbon (Col 6, lines 1-5).

Nakamura et al. ('008) teaches a similar antifouling agent which only consists of a phenol and an aldehyde in that the pH-value of this aqueous solution is changed to a pH-value of less than 5 (Page 3, lines 53-58).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Raspanti et al. with the pH ranges of Masuko et al. and Nakamura et al. in order to avoid an inadequate polymer adhesion preventative effect.

Regarding Claim 2, the primary reference Raspanti et al. ('412) is depended on as disclosed above.

Masuko et al. ('953) teaches that the pH-value of the aqueous solution is changed to a pH-value less than 5 (Col. 10, lines 41-45). The reference also suggests the presence and or use of an aromatic hydrocarbon (Col 6, lines 1-5).

Nakamura et al. ('008) teaches that the pH-value of the aqueous solution is changed to a pH-value ranging between .2 and 4 (Page 3, lines 53-58).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Raspanti et al. with the pH ranges of Masuko et al. and Nakamura et al. in order to avoid an inadequate polymer adhesion preventative effect.

Regarding Claim 3, Raspanti et al. ('412) teaches that the anti-scaling agent is an alkali metal and/or alkaline earth metal salt, preferably sodium (Col. 4, lines 5-6).

Nakamura et al. ('008) also teaches that the anti-scaling agent is an alkali metal and/or alkaline earth metal salt (Page 3, lines 44-45)

Regarding Claim 4, Raspanti et al. ('412) teaches that the pH-value is changed to those values by means of acidification with an aqueous solution of an organic and or inorganic acid (Col. 4, lines 62-66 and Col 6, lines 48-50).

Nakamura et al. ('008) also teaches that the pH-value is changed to those values by means of acidification with an aqueous solution of an organic and or inorganic acid (Page 3, line 53).

Masuko et al. ('953) also teaches that the pH-value is changed to those values by means of acidification with an aqueous solution of an organic and or inorganic acid (Col. 4, lines 1-2).

Regarding Claim 5, the primary references Raspanti et al. ('412) and Nakamura et al. ('008) are depended on as disclosed above.

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Masuko et al. ('953) teaches that the acid is selected from citric, oxalic, tartaric, hydrochloric, nitric and or sulphuric acid, preferably citric acid (Col. 4, lines 15-19).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Raspanti et al. with the acid of Masuko et al. in order to adjust the pH by acidification to avoid an inadequate polymer adhesion preventative effect.

Regarding Claim 6, Masuko et al. ('953) teaches an aqueous solution that can contain citric acid except for a specific concentration of from 1 to 10% by weight citric acid, preferably 5%. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a low concentration by weight of citric acid which garners a low pH value, in order to lower the pH value of the aqueous solution, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding Claim 7, Raspanti et al. ('412) teaches that the aqueous solution that contains the salt of the anti-scaling agent and the aqueous solution of the organic and or inorganic acid are mixed with each other before the polymerization reaction (Col.6, lines 45-50).

Regarding Claim 8, Raspanti et al. ('412) teaches that the aqueous solution which contains the salt of the anti-scaling agent and the aqueous solution of the organic and or inorganic acid are mixed with each other before being applied to the internal walls of the polymerization reactor (Col.6, lines 45-50).

Regarding Claim 9, Raspanti et al. ('412) teaches that the mixture thereby obtained is applied to the internal walls of the polymerization reactor in a stream of vapour (Col. 5, line 17-18).

Regarding Claim 10, Raspanti et al. ('412) teaches that an aqueous solution thereby obtained is applied to the internal walls of the polymerization reactor at a pressure in the range between 5 and 15 bar (Col. 1, lines 59-63).

Regarding Claim 11, Raspanti et al. ('412) discloses applying an aqueous solution to the walls of a reactor (Col. 4, lines 52-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the aqueous solution to the internal walls of the polymerization reactor for a period of time of from 15 to 45 seconds to allow for proper application and drying for subsequent coats, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding Claim 13, Raspanti et al. ('412) teaches that characterized in that the aldehyde is formaldehyde, the phenolic compound is 1-naphthol and the aromatic carboxylic acid hydroxylated at the aromatic nucleus is 2,4-dihydroxybenzoic acid (Col. 8, lines 35-42).

Regarding Claim 14, the examiner is regarding EVERCLEAN 104NS as being the same as claim 1. The references disclosed above in claim 1 are depended on.

Regarding Claim 15, Raspanti et al. does not teach that the aqueous solution contains 4-8% by weight of the alkali metal and/or earth metal salt of the anti-scaling agent.

Masuko et al. ('953) teaches that the aqueous solution contain .05-5% by weight of the alkali metal and/or earth metal salt of the anti-scaling agent (Col 3, lines 50-54).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Raspanti et al. with the specified concentration by weight of the alkali metal and/or earth metal salt as taught Masuko et al. in order to attain adequate polymer adhesion preventative effect and workability.

Regarding Claim 16, Raspanti et al. ('412) teaches that the aqueous solution has a pH-value in the range between 8 and 13.5 (Col. 4 lines 62-65)

Nakamura et al. ('008) teaches that the aqueous solution has a pH-value in the range between 3 and 8 (Page 5, lines 26-29).

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Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Raspanti et al. with the pH ranges of and Nakamura et al. in order to avoid an inadequate polymer adhesion preventative effect.

Allowable Subject Matter

Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior art does not specifically teach an aqueous solution, which contains the salt of the anti-scaling agent, and the aqueous solution of the organic and/or inorganic acid, which are mixed with each other on the wall.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lydia Edwards whose telephone number is (571) 270-3242. The examiner can normally be reached on Mon-Fri 8-5 (Alternate Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lydia Edwards
Examiner
Art Unit 1709

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WALTER D. GRIFFIN
SUPERVISORY PATENT EXAMINER